

Item 18: Measurement properties

Specify the methods used to rate the results of a measurement property for each individual study and for the summarized or pooled results, e.g., including how many reviewers rated each study and whether they worked independently.

Title	1	Title
Abstract	2	See tip sheets for Abstracts
Summary	3	Plain language summary
Open Science	4	Registration and protocol <i>a. Registration information</i> <i>b. Accession of protocol</i> <i>c. Protocol amendments</i>
	5	Support
	6	Competing interests
	7	Availability of data and other materials
Introduction	8	Rationale
	9	Objectives
Methods	10	Followed guidelines
	11	Eligibility criteria
	12	Information sources
	13	Search strategy
	14	Selection process
	15	Data collection process
	16	Data items
	17	Study risk of bias assessment
	18	Measurement properties
	19	Synthesis methods <i>a. Eligibility processes</i> <i>b. Methods for synthesis</i> <i>c. Causes of inconsistency</i> <i>d. Sensitivity analyses</i>
	20	Certainty assessment
21	Formulating recommendations	
Results	22	Study selection <i>a. Results of search and selection</i> <i>b. Excluded reports with reasons</i>
	23	OMI characteristics <i>a. Characteristics of OMIs</i> <i>b. Interpretability aspects of OMIs</i> <i>c. Feasibility aspects of OMIs</i>
	24	Study characteristics
	25	Risk of bias in studies
	26	Results of individual studies
	27	Results of syntheses <i>a. Results of syntheses conducted</i> <i>b. Results of causes of inconsistency</i> <i>c. Results of sensitivity analyses</i>
	28	Certainty of evidence
	29	Recommendations
Discussion	30	Discussion <i>a. Interpretation of results</i> <i>b. Limitations of evidence</i> <i>c. Limitations of review processes</i> <i>d. Implications</i>



Tips for reporting this item:

- Specify the criteria used to rate the results of each measurement property studied for each individual study and for the summarized or pooled results.
- Report how many reviewers rated the results of each measurement property for each individual study and for the summarized or pooled results, whether multiple reviewers worked independently, and any processes used to resolve disagreements between assessors.
- See the [E&E](#) for specifics on what details should be reported if criteria were adapted, or if construct validity, responsiveness or criterion validity were evaluated.

Examples:

“Results obtained from single studies on measurement properties were rated against COSMIN’s updated criteria for good measurement properties. Each result was rated as either sufficient (+), insufficient (-), or indeterminate (?). For studies reporting on content validity, the quality of the results were rated using the criteria for relevance (5), comprehensiveness (1), and comprehensibility (4). Regarding hypothesis testing for construct validity and responsiveness, COSMIN recommends setting a priori hypotheses prior to review commencement. Following De Vet et al., for both measurement properties, correlations were expected to be: ≥ 0.50 with instruments measuring similar constructs; < 0.50 and ≥ 0.30 with instruments measuring related but dissimilar constructs; and < 0.30 with instruments measuring unrelated constructs. No hypotheses were formulated for expected differences between groups (e.g., age, gender) for discriminant and known-groups validity. [...] an overall rating of study results per measurement property per tool was summarized as sufficient (+), insufficient (-), indeterminate (?), or inconsistent (±). Specifically, an overall rating was determined through combining the scoring of each single study; if ≥75% of the studies displayed the same scoring, that scoring became the overall rating (+ or -), whereas if < 75% of studies displayed the same scoring, the overall rating became inconsistent (±).”

Essiet IA et al. A systematic review of tools designed for teacher proxy-report of children’s physical literacy or constituting elements. *Int. J. Behav. Nutr. Phys. Act.*, 2021;18(1):1-48. <https://doi.org/10.1186/s12966-021-01162-3>.

See the [E&E](#) for more examples.

From: Elsmann EBM, Mokkink LB, Terwee CB, Beaton D, Gagnier JJ, Tricco AC, et al. Guideline for reporting systematic reviews of outcome measurement instruments (OMIs): PRISMA-COSMIN for OMIs 2024. *J Clin Epidemiol*, 2024, <https://doi.org/10.1016/j.jclinepi.2024.111422>.

More resources are available at www.prisma-cosmin.ca.